

REMARKS

The Office Action dated April 20, 2006, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 53-105 are pending in the application, of which claims 53, 67, 81, 86, and 105 are independent. Claims 53-104 have been amended, and new claim 105 has been added, to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 53-105 are respectfully submitted for consideration.

Claims 58, 72, 83, 91, and 102 were objected to because the acronym "M2M" was not spelled out. Claims 58, 72, 83, 91, and 102 have been amended to remove the use of the acronym "M2M," and it is respectfully submitted that the amendment to claims 58, 72, 83, 91, and 102 renders this objection moot. It is, therefore, respectfully requested that this rejection be withdrawn.

Claims 53-54, 56-57, 60, 62, 64, 66-68, 70-71, 74, 76, 78, 80-82, 84, 86-87, 89-90, 93, 95, 97, 99-101, and 103 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,393,285 of Stephens ("Stephens"). Applicant respectfully submits that the claims recite subject matter that is neither disclosed nor suggested by Stephens.

Claim 53, upon which claims 54-66 depend, is directed to a method including adjusting mobility management in a mobile communication network. The method also includes tracking by a mobility control unit location of communication units

communicating in the mobile communication network. The method further includes controlling by the mobility control unit the mobility management for the communication units. The method additionally includes providing the mobility control unit with mobility information related to a communication unit. The method also includes evaluating the degree of mobility of the communication unit from the mobility information related to the communication unit. The method further includes, when the evaluating indicates the immobility of the communication unit, adjusting, by the mobility control unit, values of timer elements of the communication unit and the mobility control unit to a maximum timer value or a timer value being higher than a default timer value of the mobile communication network. The timer elements define a time period of a ready state of the communication unit.

Claim 67, upon which claims 68-80 depend, is directed to an apparatus configured to act as a mobility control unit in a mobile communication network. The apparatus is also configured to track location of communication units communicating in the mobile communication network. The apparatus is further configured to control the mobility management for the communication units. The apparatus is additionally configured to receive mobility information related to a communication unit. The apparatus is also configured to evaluate the degree of mobility of the communication unit from the mobility information related to the communication unit. The apparatus is further configured to adjust, when the evaluation indicates the immobility of the communication unit, values of timer elements of the communication unit and the mobility control unit to

a maximum timer value or a timer value being higher than a default timer value of the mobile communication network. The timer elements define a time period of a ready state of the communication unit.

Claim 81, upon which claims 82-85 depend, is directed to apparatus configured to act as a communication unit configured to be used in connection with a mobile communication network comprising a mobility control unit configured to track location of communication units communicating in the mobile communication network and to control the mobility management for the communication units. The apparatus is also configured to send mobility information related to the communication unit, the mobility information being usable by the mobility control unit to evaluate the degree of mobility of the communication unit. The apparatus is further configured to set values of timer elements of the communication unit to a maximum timer value or a timer value being higher than a default timer value of the mobile communication network. The timer elements define a time period of a ready state of the communication unit. The setting of the values of the timer is on the basis of predefined changed periodic update timer values and/or predefined changed mobility management parameters received from the mobility control unit in response to the sending of the mobility information.

Claim 86, upon which claims 87-104 depend, is directed to a mobility management adjustment system including a communication unit. The system also includes a mobility control unit. The mobility control unit is configured to track location of communication units communicating in a mobile communication network. The

mobility control unit is also configured to control the mobility management for the communication units. The mobility control unit is further configured to receive mobility information related to a communication unit. The mobility control unit is additionally configured to evaluate the degree of mobility of the communication unit from the mobility information related to the communication unit. The mobility control unit is also configured to adjust, when the means adapted to evaluate indicates the immobility of the communication unit, values of timer elements of the communication unit and the mobility control unit to a maximum timer value or a timer value being higher than a default timer value of the mobile communication network. The timer elements define a time period of a ready state of the communication unit.

Applicant respectfully submits that the claims recite subject matter that is neither disclosed nor suggested by Stephens.

Stephens generally relates to a method of and system for dynamically registering and paging mobile units in a wireless system. The structure of the system of Stephens is shown in Fig. 1 and described in column 2, lines 36-62, for example. Stephens, at column 2, lines 1-22, explains that Stephens' invention relates to the monitoring of usage patterns such as the number of terminations over a selected period, or mobility. The system then determines a balance between registration and paging for the particular mobile unit monitored. Thus, low termination mobile units may be required to register less frequently.

Claim 53 recites “adjusting, by said mobility control unit, values of timer elements of said communication unit and said mobility control unit to a maximum timer value or a timer value being higher than a default timer value of said mobile communication network, said timer elements defining a time period of a ready state of said communication unit.” Applicant respectfully submits that Stephens fails to disclose or suggest at least this feature of claim 53.

The Office Action took the position that this feature is disclosed by column 3, lines 56-64, and column 4, lines 23-29, of Stephens. Applicant respectfully disagrees.

Stephens, at column 3, lines 56-64 indicates that “the system instructs mobile unit 19 to register at a lower periodic registration frequency” when the mobile unit 19 has a lower mobility. This instruction may implicitly result in the adjustment of the value of a timer element in the mobile unit (not admitted), but does not and cannot adjust the value of a timer in element in a mobility control unit.

Similarly, Stephens, at column 4, lines 23-29, indicates that “the HLR sends a short message service (SMS) message to the mobile unit instructing the mobile unit [to] register less often.” As with the previously described instruction, this instruction may implicitly result in the adjustment of the value of a timer element in the mobile unit (not admitted), but does not and cannot adjust the value of a timer in element in a mobility control unit.

Indeed, the only passage in Stephens that discusses the adjustment of settings in the MSC (which the Office Action took as corresponding to the claimed mobility control

unit) is in column 4, lines 27-29. In that passage, however, Stephens indicates that when a number of terminations is less than a threshold, the MSC is instructed to page the mobile unit in a larger paging area. Accordingly, the adjusted setting in the MSC is not that of a timer value, but of a paging area.

Accordingly, Stephens does not disclose adjusting “values of timer elements of said communication unit and said mobility control unit,” as recited by claim 53, and it is respectfully requested that the rejection of claim 53 be withdrawn.

Claims 67 and 86 similarly recite “adjust ... values of timer elements of said communication unit and said mobility control unit.” Accordingly, Stephens also does not disclose at least this feature of claims 67 and 86, and it is respectfully requested that the rejection of claims 67 and 86 be withdrawn.

Claim 81 recites “to set values of timer elements of said communication unit to a maximum timer value or a timer value being higher than a default timer value of said mobile communication network, said timer elements defining a time period of a ready state of said communication unit, on the basis of predefined changed periodic update timer values and/or predefined changed mobility management parameters received from said mobility control unit in response to the sending of said mobility information.” Applicant respectfully submits that Stephens fails to disclose or suggest at least this feature of claim 81.

The Office Action took the position that provision in column 3, lines 56-64, of the lower periodic registration frequency inherently teaches the provision of a timer value.

However, the instructions with the lower periodic registration frequency is, as described at column 3, lines 56-57, of Stephens, responsive to the determination of the HLR 21 that the mobile unit 19 does not move around substantially, and not (as claimed) “in response to the sending of said mobility information.” In other words, the mobile unit 19 of Stephens does not send mobility information, but instead the HLR 21 makes a determination based on a monitored usage pattern of mobile unit 19.

Accordingly, applicants respectfully submit that at least this feature of claim 81 is neither disclosed nor suggested by Stephens, and it is respectfully requested that the rejection of claim 81 be withdrawn.

Claims 54, 56-57, 60, 62, 64, 66, 68, 70-71, 74, 76, 78, 80, 82, 84, 87, 89-90, 93, 95, 97, 99-101, and 103 depend from claims 53, 67, 81, and 86 respectively, and recite additional limitations. It is, therefore, respectfully submitted that each of claims 54, 56-57, 60, 62, 64, 66, 68, 70-71, 74, 76, 78, 80, 82, 84, 87, 89-90, 93, 95, 97, 99-101, and 103 recites subject matter that is neither disclosed nor suggested by Stephens. Thus, it is respectfully requested that the rejection of claims 54, 56-57, 60, 62, 64, 66, 68, 70-71, 74, 76, 78, 80, 82, 84, 87, 89-90, 93, 95, 97, 99-101, and 103 be withdrawn.

Furthermore, with regard to each of the independent claims, the description of the time period has been amended, such that the time period is now: “a time period of a ready state of said communication unit ~~and/or a time period for performing a location update for said communication unit.~~” The Office Action previously had treated the time period “of a ready state of said communication unit” as optional. Applicant respectfully submits

that the amendments clarify that this feature is not optional, and respectfully submit that Stephens also does not disclose or suggest at least this feature of the claims.

Claims 55, 69, and 88 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stephens in view of U.S. Patent No. 6,078,826 of Croft et al. (“Croft”). The Office Action took the position that although Stephens fails to disclose the additional features of claims 55, 69, and 88, Croft remedies the deficiencies of Stephens. Applicant respectfully submits that the claims recite subject matter that is neither disclosed nor suggested by the combination of Stephens and Croft.

Claims 55, 69, and 88 depend from claims 53, 67, and 86 respectively, and recite additional limitations. The deficiencies of Stephens with regard to claims 53, 67, and 86 are explained above. Croft does not remedy the above-described deficiencies of Stephens, and thus the combination of Stephens and Croft fails to disclose or suggest all of the elements of any of the presently pending claims.

Croft generally relates to a mobile telephone power savings method and apparatus responsive to mobile telephone location. As explained at column 1, lines 48-62, Croft aims to save battery power by placing a phone in deep-sleep mode when the phone is within a predetermined geographic area. Accordingly, it is unsurprising that Croft does not disclose or suggest the above-identified features with regard to which Stephens is deficient. Accordingly, Croft fails to remedy the deficiencies of Stephens, and it is respectfully requested that this rejection be withdrawn.

Claims 58, 72, 83, 91, and 102 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stephens in view of U.S. Patent No.6,275,695 of Obhan ("Obhan"). The Office Action took the position that although Stephens fails to disclose the additional features of claims 58, 72, 83, 91, and 102, Obhan remedies the deficiencies of Stephens. Applicant respectfully submits that the claims recite subject matter that is neither disclosed nor suggested by the combination of Stephens and Obhan.

Claims 58, 72, 83, 91, and 102 depend from claims 53, 67, 81, and 86 respectively, and recite additional limitations. The deficiencies of Stephens with regard to claims 53, 67, 81, and 86 are explained above. Obhan does not remedy the above-described deficiencies of Stephens, and thus the combination of Stephens and Obhan fails to disclose or suggest all of the elements of any of the presently pending claims.

Obhan generally relates to spectrum yield management in a wireless communication system. As explained at column 2, lines 16-45, Obhan aims to manage spectrum intelligently in an environment that includes other kinds of communication in addition to voice communications, based on historical and projected loading levels. Accordingly, it is unsurprising that Obhan does not disclose or suggest the above-identified features with regard to which Stephens is deficient. Accordingly, Obhan fails to remedy the deficiencies of Stephens, and it is respectfully requested that this rejection be withdrawn.

Claims 59, 61, 63, 65, 73, 75, 77, 79, 85, 92, 94, 96, 98, and 104 were rejected under 35 U.S.C. 103(a) as being unpatentable over Stephens in view of WO 99/52306 of

Kalliokulju (“Kalliokulju”). The Office Action took the position that although Stephens fails to disclose the additional features of claims 59, 61, 63, 65, 73, 75, 77, 79, 85, 92, 94, 96, 98, and 104, Kalliokulju remedies the deficiencies of Stephens. Applicant respectfully submits that the claims recite subject matter that is neither disclosed nor suggested by the combination of Stephens and Kalliokulju.

Claims 59, 61, 63, 65, 73, 75, 77, 79, 85, 92, 94, 96, 98, and 104 depend from claims 53, 67, 81, and 86 respectively, and recite additional limitations. The deficiencies of Stephens with regard to claims 53, 67, 81, and 86 are explained above. Kalliokulju does not remedy the above-described deficiencies of Stephens, and thus the combination of Stephens and Kalliokulju fails to disclose or suggest all of the elements of any of the presently pending claims.

Kalliokulju generally relates to a method in a packet network. As explained at page 6, lines 12-22, Kalliokulju aims to, for example, address the issue of power consumption by a wireless device that remains in the same place throughout a working day. Accordingly, it is unsurprising that Kalliokulju does not disclose or suggest the above-identified features with regard to which Stephens is deficient. Accordingly, Kalliokulju fails to remedy the deficiencies of Stephens, and it is respectfully requested that this rejection be withdrawn.


For the reasons explained above, it is respectfully submitted that each of claims 53-105 recites subject matter that is neither disclosed nor suggested in the cited art. It is,

therefore, respectfully requested that all of claims 53-105 be allowed, and that this application be passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicant respectfully petitions for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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Enclosures: Petition for Extension of Time
Additional Claim Fee Transmittal
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